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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Peter Mahr

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EXAMINER

AGUSTIN, PETER VINCENT

ART UNIT

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2627

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/584,686	Applicant(s) MAHR ET AL.	
	Examiner Peter Agustin	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 June 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

1. This application is a national stage entry (371) of PCT/EP04/13506, filed November 26, 2004.
2. Claims 1-11 are currently pending.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

4. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

6. Claims 1-11 are objected to because of the following informalities:

Claim 1 recites "determining the type of the abnormal region; and measuring the radial extension of the abnormal region perpendicular to a track direction". This recitation lacks

a clear interrelation between the claimed steps. In light of applicant's disclosure, the examiner suggests replacing this recitation with --measuring the radial extension of the abnormal region perpendicular to a track direction; and determining the type of the abnormal region based on the measured radial extension--.

Claims 10 & 11: the examiner suggests replacing "wherein it has" with --comprising--.

Claims 2-11 are dependent upon claim 1.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 10 & 11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 10 & 11 recite "means for performing a method according to claim 1", which means recitation does not appear in combination with another recited element of means, and is therefore subject to undue breadth rejection under 35 U.S.C. § 112, first paragraph, see *In re Hyatt*, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983), see also MPEP § 2164.08(a).

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-7 & 9-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Kühn et al. (US 5,485,444).

In regard to claim 1, Kühn et al. disclose a method for analyzing an abnormal region on an optical recording medium (title: “signalization of types of defects of an optical information carrier”), including the steps of: detecting the abnormal region (column 6, lines 49-50: “an evaluation of defective frames in error burst”); determining the type of the abnormal region (column 6, lines 54-55: “distinction between errors caused by fingerprints, scratches and black dots”); and measuring the radial extension of the abnormal region perpendicular to a track direction (column 6, lines 55-61: “It has become apparent that the reparable cause of error fingerprint is present as a first type of error FA1 when more than three error bursts h appear in five neighboring tracks k. On the other hand, scratches and black dots as second type of error FA2 are identified by the appearance of up to three error bursts h in three neighboring tracks k.”), wherein the step of determining the type of the abnormal region includes: making a speed controlled jump over the abnormal region (understood from the teaching that the number of “neighboring tracks” with “error bursts” are counted); obtaining information on the type of abnormal region (column 6, lines 49-55: “a size of error burst h relating to a subcode block time corresponding to four frames within a 96 frame was selected in order to enable, in combination with a number of tracks k to be examined regarding the appearance of errors, a distinction between errors caused by fingerprints, scratches and black dots”) during the speed controlled jump.

In regard to claim 2, Kühn et al. disclose that the step of determining the type of the abnormal region further includes: differentiating between a first group of types (column 6, lines 49-55: “fingerprints”) and a second group of types (column 6, lines 49-55: “scratches and black dots”) of abnormal region based on the obtained information (column 6, lines 49-55: “size of error burst”; “number of tracks”).

In regard to claim 3, Kühn et al. disclose that the step of obtaining information on the type of abnormal region during the speed controlled jump includes evaluating a data signal and/or a track crossing signal (column 6, lines 49-61: “number of tracks”; “neighboring tracks”) obtained from the optical recording medium.

In regard to claim 4, Kühn et al. disclose that the step of measuring the radial extension of the abnormal region includes measuring the time needed for jumping over the abnormal region (column 3, lines 13-16: “a measuring (test) signal is derived from the high frequency signal and the appearance of said measuring signal within an upper and lower threshold value is established over a time period characterizing the cause of error”; column 3, lines 36-39: “The time range characterizing fingerprint as cause of error is preferably a duration of 4 ms or longer in which the measuring signal, derived from the high frequency signal, appears within the threshold values”).

In regard to claim 5, Kühn et al. disclose jumping back to the start of the abnormal region (understood from column 7, lines 22-25: “the fingerprint cause of error is determined from the high frequency signal RF detected from the optical disk by the playback device 1”); reading data stored in the abnormal region (“high frequency signal RF”); and evaluating the data for

determining the type of abnormal region (column 7, lines 22-25: “the fingerprint cause of error is determined from the high frequency signal RF”) (see also column 11, lines 8-24).

In regard to claim 6, Kühn et al. disclose that the step of evaluating the data for determining the type of abnormal region includes evaluating a sync signal included in the data (column 6, lines 29-31: “first subcode synchronizing signal SCOR”; line 38: “subcode ATIME”; lines 50-55: “a size of error burst h relating to a subcode block time”).

In regard to claim 7, Kühn et al. disclose that the step of measuring the radial extension of the abnormal region includes counting the number of wrong syncs in the abnormal region (column 6, lines 50-55: “a size of error burst h relating to a subcode block time corresponding to four frames within a 96 frame was selected in order to enable, in combination with a number of tracks k to be examined regarding the appearance of errors, a distinction between errors caused by fingerprints, scratches and black dots”).

In regard to claim 9, Kühn et al. disclose that the types of abnormal region include at least one of a groove region, a mirror region, a defect region, a wrong bitrate region and a wrong structure region (title: “defects”).

In regard to claim 10, Kühn et al. disclose a device (Figure 6) for analyzing an abnormal region (note “error indicating device”) on an optical recording medium, wherein it has means for performing a method according to claim 1 (as noted above).

In regard to claim 11, Kühn et al. disclose an apparatus (Figure 6) for reading from and/or writing to optical recording media (note “playback device”), wherein it has means for performing a method according to claim 1 for analyzing an abnormal region on an optical recording medium (as noted above).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kühn et al. in view of Mitarai (JP 54048213 A).

For a description of Kühn et al., see the rejection above. However, Kühn et al. do not disclose: in regard to claim 8, a step of storing the position, the radial extension and/or the type of the abnormal region on the optical recording medium.

Mitarai discloses: in regard to claim 8, storing the position and the radial extension of an abnormal region of an optical recording medium (abstract: “stores the presence or not, quantity, length, position, etc. of the defect areas”).

It would have been obvious to one of ordinary skill in the art at the time of invention to have applied these teachings of Mitarai to the method of Kühn et al., the motivation being to improve the utilization efficiency of the optical recording medium and to simplify design (see purpose).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shimote et al. (US 5,212,677) disclose an apparatus which inspects disc-shaped information recording media, such as optical disks and magnetic disks, in a single reproduction,

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wherein the apparatus detects the type of defect and classifies the defects into defect clusters by the defect position in the radial and circumferential directions, and the type of defect or defect cluster, position and size are memorized.

Van Den Enden (US 7,215,619) discloses a method of detecting large spot disc defect. The integrity of predetermined test tracks is assessed on the basis of a tracking signal. When a defective test track is found, the proximity of the test track is examined further. If the number of affected tracks appears to be small, recording in these tracks is allowed. If the number of affected tracks appears to be large, these tracks are entered in a defect list, which may be recorded on the disc. During recording, the tracks appearing in the defect list are skipped.

Ueda et al. (US 7,038,983) disclose a defect detection means that determines the type and/or size of a defect and a window generation means that changes the quantity of a change in a width of a synchronization detection window signal according to the determined type and/or size of the defect.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Agustin whose telephone number is 571-272-7567. The examiner can normally be reached on Monday-Thursday 8:30 AM-6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on 571-272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Peter Vincent Agustin/
Patent Examiner
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